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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,243	03/15/2001	Michael Charles Milner Cockrem	2027.602000	5401

23720 7590 09/28/2004

WILLIAMS, MORGAN & AMERSON, P.C.  
10333 RICHMOND, SUITE 1100  
HOUSTON, TX 77042

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/809,243	<b>Applicant(s)</b> COCKREM ET AL.	
	<b>Examiner</b> Virginia Manoharan	<b>Art Unit</b> 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED OFFICE ACTION

Claims 1-50 are objected to because of the following informalities:

- a) The inconsistent used of terminology in the claims is improper.

For example only: the azeotroping agent "in claim 4, line 3 as opposed to 'at least one azeotroping agent "in claim 1, the claim from which it depends. [Applicants should further correct any inconsistency in the used of terminologies in the claims].

- b) Claims 49 appears to be at odd with the claim from which it depends, i.e. claim 1. Claim 49, e.g., recites a "feed stream comprises an extract of a fermentation broth..." whereas, claim 1 recites a "feedstream comprising at least one of an organic and ammonium salt..." which is at odd therewith.[ A dependent claims incorporate every feature of the claims from which it depends and cannot change the limitation already recited in the independent claim].

Claims 1-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are rejected for the same reasons as set forth at the paragraph bridging pages 2 and 3 of the previous Office action.

Claim 1 initially recites" distilling the feed stream by a method comprising the steps of" however, the claim merely recites a heating step. Distillation, by definition, is a combination of evaporation, vaporization, boiling, or the like, and a condensation steps, but both steps are not recited, e.g., in claim 1. Mere heating would read on a heat- exchanging process, a unit of operation distinct from distillation.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

The claimed, "...wherein the feed stream comprises a fermentation broth, wherein the fermentation broth comprises the organic acid ammonium salt, the organic acid amide, or the alkylamine-organic acid complex..." claimed in claim 25 is not positively recited in the specification.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-58 are provisionally rejected under the judicially created doctrine of obviousness – type double patenting as being unpatentable over claims 1-54 and 1-64 of copending Application No. 09/809,534 and 09/809,649 respectively for the same reasons as set forth at page 4, third and fourth full paragraphs of the previous Office action.

Claims 1-58 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-54 and 1-64 of copending Application No. 09/809,534 and 809,649 respectively. This is a provisional double patenting rejection since the conflicting claims have not yet been attended.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that

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compending application since the referenced compending application and the instant application are claimed common subject matter as set forth at the paragraph bridging pages 4 and 5.

Further, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other compending application. See *In re Schneller*, 397 F 2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 19-26, 30-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker 4,191,616.

Baker discloses substantially the process as claimed. See e.g. col. 4, lines 26-67. While not positively recited, obviously the decomposition occurs to produce the organic acid.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (4,191,616) in view of Othmer (2,050,234).

Othmer is applied to teach that the "...process comprising condensing the first vapor stream to form a first liquid stream, wherein the first liquid stream is capable of being separated into a first phase and a second phase, wherein the first phase comprises a higher concentration of organic acid than the second phase, and wherein the second phase comprises the at least one azeotroping agent..." as claimed in claim 13; and the step of separating the first liquid stream into a first phase and a second phase, wherein

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the first phase comprises a higher concentration of organic acid than the second phase, and wherein the second phase comprise the at least one azeotroping agent.." as further claimed in claim 14 are conventionally done in the art as taught by Othmer. See e.g., Figs 1-3. To incorporate the process of Othmer with the process of Baker would have been obvious to one of ordinary skill in the art for the advantage taught in Othmer at page 5, lines 19-20.

Applicant's arguments filed May 6, 2004 have been fully considered but they are not persuasive.

**A. Rejection under 35 USC § 112, Second Paragraph.**

However, that "...the azeotroping agent is selected so that it is capable of forming an azeotrope with a particular organic acid..", and that "... a mixture of the azeotroping agent and acid is heated to a temperature sufficient to produce a vapor stream comprising the azeotrope.." as argued are irrelevant. They are not the basis of the rejection. Moreover, while one may know the process of "...determining the temperature needed at a pressure to produce an azeotrope however, one would not know the process and composition defining the azeotrope within the context of the claimed invention.

Claims 11-12, 15-18, 27-29 & 49-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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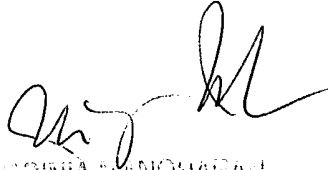
GB' 787 discloses a process involving an azeotrope distillation..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-271-1450. The examiner can normally be reached on Tuesday-Friday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan/af  
September 23, 2004

  
VIRGINIA MANOHARAN  
PRIMARY EXAMINER  
ART UNIT 127764